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ABSTRACT

This document is comprised of five fact sheets from the Illinois Department of Public Health regarding childhood lead poisoning. Recent studies claim that childhood lead poisoning can contribute to problems later in life, such as academic failure, juvenile delinquency, and high blood pressure. Directed to parents, caregivers, and health care providers, the topics of the fact sheets are: (1) "Facts about Nutrition and Lead Poisoning"; (2) "Facts about the Medical Consequences of Lead Poisoning"; (3) "Facts about Lead Poisoning for Health Care Providers"; (4) "Facts about Housekeeping Tips To Reduce Lead Exposure"; and (5) "Facts about Childhood Lead Poisoning." Each fact sheet concludes with information on contacting the Illinois Department of Public Health for additional information on lead poisoning. (KB)

Get the Lead Out:
Facts about Childhood Lead Poisoning
[and]
Housekeeping Tips to Reduce Lead Exposure
[and]
Nutrition and Lead Poisoning
[and]
The Medical Consequences of Lead Poisoning
[and]
Lead Poisoning for Health Care Providers

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ILLINOIS DEPARTMENT OF PUBLIC HEALTH

Get the Lead Out *Facts About*

Childhood Lead Poisoning

What is lead poisoning?

Lead poisoning is the presence of too much lead in the body. The most common preventable pediatric health problem in the United States today, it is caused by exposure to lead that is either eaten or breathed, in the form of dust. The body carries the lead in the blood to soft tissues and bones, where it can be stored for many years. Lead harms several organs, including the nervous system and kidneys.

What are common items that contain lead?

The largest source of lead is paint manufactured before 1978 and the dust created when it decays. This paint was used for many purposes, including painting the interior and exterior of houses, playground equipment, farm machinery and toys. Other items also contain lead. Some imported crayons and miniblinds, calcium supplements and hair dyes have high lead contents, as do improperly glazed pottery, certain cosmetics, leaded crystal and some folk remedies. Certain hobbies—such as stained glass, target shooting and casting fishing weights—can expose people to lead.

Who gets lead poisoning?

People of any age, race or economic level can get lead poisoning, but children are at the greatest risk. Their small bodies absorb more lead than adult bodies do, and the lead harms them more because their bodies are still growing. Children also are more likely to absorb lead dust because they place hands and other objects in their mouths.

Adults with certain occupations that expose them to lead can get lead poisoning as well. These jobs include battery manufacturing and recycling, construction work, auto repair and lead smelting. Workers in these occupations can unknowingly carry lead dust home from the workplace and expose their families. People who remodel their own homes have a high risk of becoming lead poisoned. Lead poisoning also can be passed from a pregnant mother to her unborn child.

How many children have lead poisoning?

National surveys estimate that more than 3 million children 6 years of age and younger have lead poisoning. This number represents almost one out of every six children under the age of 7. However, the risk of lead poisoning is much greater in Illinois. Almost one out of every four Illinois children has lead poisoning. The rate is even higher in urban areas. In 1999, 26,645 children were found to have elevated blood lead levels in Illinois.

What are the symptoms of lead poisoning?

Lead poisoning has no obvious signs, and most children do not report any abnormal symptoms. Children with lead poisoning might report stomachaches, decreased appetite, hyperactivity, sleeping problems or irritability. Because these symptoms appear to mimic other childhood problems, lead poisoning is sometimes mistaken for a cold or the flu.

What kinds of complications can lead poisoning cause?

Lead poisoning is related to a number of serious health problems. Children with elevated lead levels may suffer from learning disabilities, mental retardation, behavioral problems, lowered IQ, stunted growth and hearing impairment. Convulsions, coma and death can occur at higher lead levels. Some recent studies claim that childhood lead poisoning can contribute to problems later in life, such as academic failure, juvenile delinquency and high blood pressure.

How can I tell if my child has lead poisoning?

The only way to diagnose lead poisoning is by having a blood test. A doctor or nurse takes blood from a child's finger or arm. They send the blood sample to a laboratory to find out how much lead it contains. A level of 10 micrograms per deciliter (mcg/dL) or greater is considered unsafe. All children 6 months through 6 years of age who are entering day care, preschool or kindergarten must be assessed for lead poisoning by a health care provider.

How is lead poisoning treated?

Special drugs, called chelators, may be used to treat children with very high blood lead levels. These medications are given in the hospital either through intravenous or intramuscular injections or by mouth. The medicine attaches to the lead and pulls it out of the body in the urine. If the lead level is very high, more than one treatment session may be necessary to lower the amount of lead in the blood. Even after treatment, some children's blood lead levels never decrease to less than 10 mcg/dL. Children with elevated blood levels may be placed on special diets and need to be monitored closely to lower their risk of lead related complications.

How can lead poisoning be prevented?

Lead poisoning can be prevented by taking simple precautions around the house. These methods include the following steps:

- Cleaning up paint chips and peeling paint.
- Washing floors, counter tops and window sills weekly with an all-purpose detergent or a detergent specifically formulated to remove lead dust.
- Feeding children a diet high in iron, calcium and vitamin C and low in fat.
- Offering children healthy snacks, such as fruit or pretzels, throughout the day so they will not put non-food items into their mouths.
- Using proper safety measures when renovating or remodeling your house, like not using electric sanders or heat guns to remove paint or wallpaper.
- Assuring that children and pregnant women do not enter a work area until renovations are complete and the area has been thoroughly cleaned.
- Washing a child's hands, mouth and face, and toys often.
- Allowing the cold water to run for several minutes in the morning before using it for drinking, cooking or mixing infant formula in case lead pipes or solder is present.
- Removing shoes when coming indoors so lead dust is not tracked inside.
- Laundering work clothes separately from other clothes.
- Not serving or storing food in pottery made outside the United States.
- Most importantly, having children assessed for lead poisoning each year.

For more information on lead poisoning, please contact the Illinois Department of Public Health at 217-782-0403, 800-545-2200, or TTY (hearing impaired use only) 800-547-0466; or call your local health department.

ILLINOIS DEPARTMENT OF PUBLIC HEALTH

Get the Lead Out *Facts About*

Housekeeping Tips to Reduce Lead Exposure

Certain housekeeping methods can reduce the amount of lead dust in your home. By reducing dust, these easy cleaning tips can prevent lead poisoning and lower blood lead levels. Before cleaning, all areas that display flaking or peeling paint need to be repaired. Please contact the Illinois Department of Public Health at 217-782-3517 for information on repairing or renovating your home or for a list of licensed lead inspectors and contractors.

Cleaning Supplies

- Latex or rubber gloves
- Paper towels or disposable rags
- All-purpose detergent OR cleaning detergent made for removing lead dust (can be found in most hardware or home improvement stores)
- Heavy-duty plastic garbage bag(s) or 6 mil poly bag(s)
- Three one-gallon buckets, one with a mop squeezer
- Sponge
- String mop
- Water
- Contact paper or duct tape

Before Starting

1. Do not allow children, pets or pregnant women into the area until cleaning is complete.
2. Do not eat, drink, chew gum or tobacco, or smoke during the cleaning process.
3. Wear clothing that can be easily washed and latex gloves to protect hands from the detergent. Also, be sure to wash hands after cleaning.

Cleaning Methods

1. Vacuum all surfaces using a HEPA (high efficiency particulate air) vacuum or a vacuum with a HEPA filter. Start with the ceiling and work down the walls. Be sure to vacuum shelves, tops of doors, windows and upholstered furniture. Vacuum the floor last. Do not use a regular vacuum cleaner to pick up lead paint chips and dust. Lead dust particles are too small to be caught by the filter in a household vacuum and will be scattered into the air.
2. After thoroughly vacuuming, wet-wash all hard surfaces (floors, counter tops, window wells and sills, etc.). Always use a three-bucket system. Add detergent to the first bucket, diluting according to manufacturer's instructions. Put the mop squeezer on the second bucket and use it to hold dirty water. Add clear water to the third bucket for rinsing. When separate detergent and rinse buckets are used, the detergent solution stays cleaner.
 - a. Put sponge or mop into detergent bucket (bucket #1). Squeeze out extra detergent into second bucket (#2) and wash one area.
 - b. Rinse out sponge or mop in rinse water (#3) and squeeze excess into second bucket (#2). On dirty surfaces, rinse sponge or mop several times (#3) after wiping the floor. Change rinse water often, at least twice in each room.
 - c. Repeat above process (#1, #2, wash area, #3, #2).
 - d. After cleaning, the floor should be rinsed. Clean out the buckets. Repeat the above process, using plain water instead of detergent solution in the first bucket (#1, #2, rinse area, #3, #2).

3. Be sure to change rags and mop heads frequently, so lead dust is removed and not just smeared around. If rags and mop heads are to be washed and reused, run one cycle of clear water through the washing machine before doing other laundry.
4. Wait at least two hours. Repeat cleaning and vacuuming processes to remove any dust that may have settled.

Proper Disposal of Cleaning Supplies

1. Once finished, put dirty towels, rags, mops and sponges into heavy-duty plastic (6 mil poly) bags. Seal each bag tightly with tape or a tie and place in regular garbage. Keep cleaning materials and garbage out of reach of children and pets.
2. Pour dirty water into the toilet instead of the sink, so the lead does not contact food preparation areas.
3. Do not burn lead-contaminated materials because lead can be absorbed by breathing the smoke and fumes.
4. Wash clothes worn during cleaning separately from other clothing. Also, wet-wipe cleaning tools and discard these towels and rags with other cleaning materials.

Other Housekeeping Tips

Once the house is clean and in good condition, follow these tips so dust is not allowed to build up.

1. Wet-wash hard surfaces and vacuum floors weekly to control dust levels.
2. To prevent tracking lead dust into the home, remove shoes when coming indoors or place mats or rugs at the door to wipe shoes.
3. Install contact paper over painted shelves where food is stored and over chipping paint. Be sure to check the condition of the contact paper. Replace it as it gets old and does not stick well to the surface. Heavy tape, such as duct tape or electrical tape, can be placed on window sills, stair rails and table edges as a temporary barrier to prevent children from being exposed to chipping paint or lead dust.
4. Consider sealing surfaces, so cleaning is easier. For example, waxable tile, vinyl and wooden floors should be properly maintained.
5. Consider replacing the carpet, since it is hard to thoroughly clean. Please contact the Illinois Department of Public Health at 217-782-3517 for instructions on safely removing carpet containing lead dust.
6. Wet-wipe other flat surfaces where dust collects -- for example, television screens, table tops, crib rails, stair steps and doorknobs -- weekly.
7. Be sure to clean areas that rub against a leaded surface weekly. These areas include doors and windows. Pay special attention to the window trough, the inner part between the window sill and the storm window.
8. Remove or replace miniblinds unless you are sure they do not contain any lead. If this is impossible, soak blinds in detergent in a bathtub for 10 minutes.
9. If someone in the household works with lead, be sure he or she removes work clothes carefully. Launder these clothes separately. Also, make sure the person showers and washes his/her hair as soon as possible after work. If possible, use shower facilities at work, so lead dust is not carried into your vehicle and into your home.

For more information on lead poisoning, please contact the Childhood Lead Poisoning Prevention Program at 217-782-0403, 800-545-2200, or TTY (hearing impaired use only) 800-547-0466; or call your local health department.

ILLINOIS DEPARTMENT OF PUBLIC HEALTH

Get the Lead Out *Facts About*

Nutrition and Lead Poisoning

The only way to totally prevent lead poisoning and to lower blood lead levels is to remove all sources of lead. However, certain aspects of nutrition and hygiene can influence the amount of lead absorbed by a child.

Regular meals

Feeding your child regular meals and snacks will help his/her body to absorb less lead. An empty stomach absorbs more lead. Children should be fed three meals and two or three snacks each day. Use the Food Guide Pyramid to help choose healthy foods.

Foods high in iron

To the body, lead and iron look very similar. When more iron than lead is present, the body will be more likely to absorb the iron. Iron-rich foods should be served at least twice a day. The following foods are rich in iron:

- red meats and poultry
- oysters, clams and mussels
- dried beans and peas
- nuts or sunflower seeds
- fish, tuna and salmon
- iron-fortified cereals
- raisins, dates and prunes
- green leafy vegetables

Foods high in calcium

Foods high in calcium also help the body to absorb less lead. Serve foods high in calcium at least three times each day. Foods rich in calcium include the following:

- milk and milk products
- salmon with bones
- calcium-enriched orange juice
- cheese and cottage cheese
- yogurt
- tofu

Foods high in vitamin C

Vitamin C helps the body to absorb iron and calcium. Foods that contain vitamin C should be served at least once each day. Some foods that are high in vitamin C include the following:

- oranges
- potatoes
- grapefruit
- limes
- tomatoes
- tangerines
- lemons
- kiwi fruit
- strawberries
- sweet potatoes
- broccoli
- canteloupe

Low-fat foods

Since fat increases lead absorption, choose foods that are low in fat. These tips can help to reduce the fat in meals:

- Boil, bake, grill or broil foods instead of frying them.
- Buy lean meats and trim excess fat.
- Use less butter, oil, lard or shortening when cooking.
- Substitute pretzels, fruit or other healthy snacks for potato chips, french fries, doughnuts and snack cakes.

Other foods to avoid

- Foods stored in lead-soldered cans, glazed ceramic dishes or leaded crystal
- Vegetables grown in lead-contaminated soil
- Foods or drinks made with lead-contaminated water (Always use cold water for cooking or drinking; let the cold water run for a few minutes before using it.)
- Foods stored in printed plastic bread bags (The inks used for the wrapper may contain lead.)

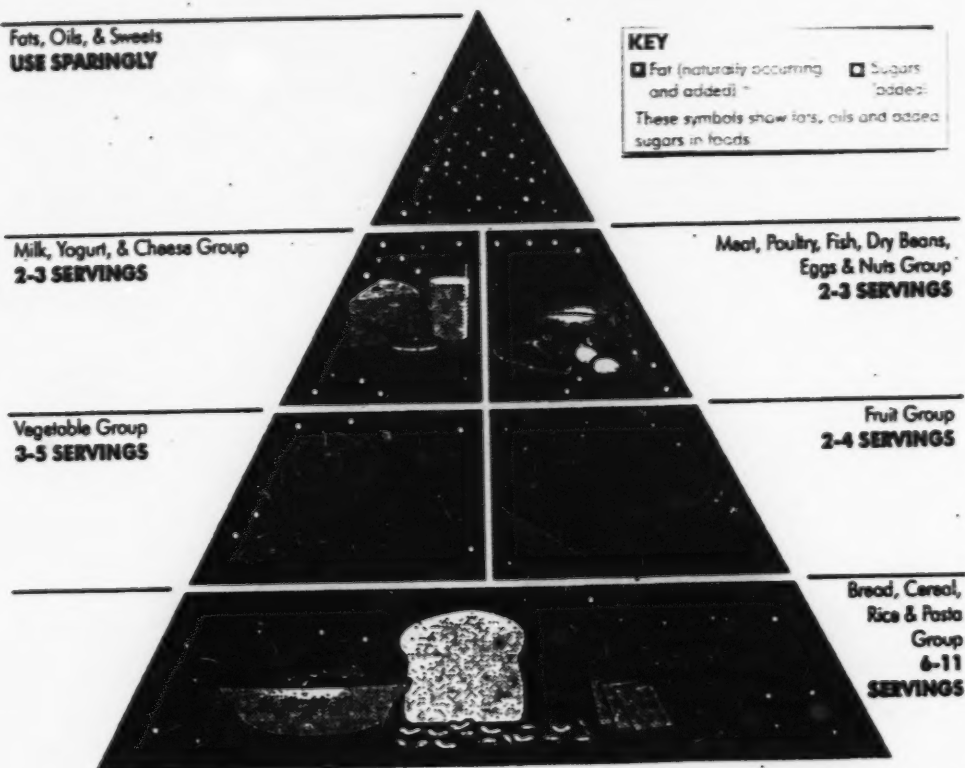
Good hygiene

Good hygiene is also important in protecting children against lead poisoning. Follow these suggestions:

- Wash a child's hands, face and mouth often, especially before meals.
- Wash bottle nipples, pacifiers and toys that are placed in children's mouths often.
- Keep children's fingernails short, so lead dust cannot be easily trapped.
- Always eat at a clean table. Food that has been dropped on the ground should be discarded.

FOOD GUIDE PYRAMID

A Guide to Daily Food Choices



For more information on lead poisoning, please contact the Illinois Department of Public Health at 217-782-0403, 800-545-2200, or TTY (hearing impaired use only) 800-547-0466; or call your local health department.

ILLINOIS DEPARTMENT OF PUBLIC HEALTH

Get the Lead Out *Facts About*

The Medical Consequences of Lead Poisoning

What is lead poisoning?

Lead poisoning is the presence of too much lead in the body. The most common preventable pediatric health problem in the United States today, it is caused by exposure to lead that is either eaten or breathed, in the form of dust. The body carries the lead in the blood to soft tissues and bones, where it can be stored for many years. Lead harms several organs, including the nervous system and kidneys.

What are the symptoms of lead poisoning?

Lead poisoning has no obvious signs, and most children do not report any abnormal symptoms. Children with lead poisoning might exhibit stomachaches, decreased appetite, hyperactivity, sleeping problems or irritability. Because these early symptoms mimic other childhood problems, lead poisoning is sometimes mistaken for a cold or the flu. Later symptoms of lead poisoning may include vomiting, weight loss, dizziness and convulsions.

What other problems can lead poisoning cause?

Lead poisoning is related to a number of serious health concerns. Blood lead levels as low as 10 micrograms per deciliter (mcg/dL) are associated with health problems. Lead-poisoned children are often iron-deficient and are less able to use essential nutrients, like vitamin D. They also may suffer from learning disabilities, mental retardation, behavioral problems, lowered intelligence, stunted growth and hearing loss. Coma and death can occur at higher lead levels. Some recent studies claim that childhood lead poisoning can contribute to problems later in life, such as academic failure, juvenile delinquency and high blood pressure.

Why are children at a greater risk for lead poisoning?

Children are at greatest risk of lead poisoning because their small bodies absorb more lead than adult bodies do, and the lead hurts them more because their bodies are still growing. Lead often targets the developing brain and nervous system. The effects of lead are often permanent, so any damage that occurs in childhood could last throughout a child's lifetime.

Children are also more likely to absorb lead dust due to certain behaviors. They are more likely to place hands and other objects that may carry lead dust into their mouths, and their proximity to the floor places children in greater contact with potentially contaminated dust and dirt. Some children have a condition called pica, which is a tendency to eat non-food items. These children are at a very high risk for lead poisoning if they eat leaded soil, newspapers with leaded ink, peeling paint or tobacco products.

Even unborn children can be hurt by lead. If a pregnant woman has an elevated blood lead level, the lead can pass from her blood to the blood of her unborn baby, causing damage similar to the problems associated with postnatal lead exposure. Women with elevated lead levels may deliver premature babies or babies with low birth weight. These children are more likely to have language and intellectual delays later in life.

How can I tell if my child has lead poisoning?

The only way to diagnose lead poisoning is with a blood test. A doctor or nurse takes blood from a child's finger or arm. The blood sample is sent to a laboratory to find out how much lead it contains. A level of 10 mcg/dL or greater is considered unsafe.

All children from 6 months through 6 years of age should be assessed every year for their risk of lead poisoning. Illinois state law requires all children entering day care, preschool or kindergarten to provide proof of a blood lead test or assessment. To find out how to test your child, call your doctor or local health department.

How is lead poisoning treated?

For children with blood lead levels of 45 mcg/dL or higher, special drugs, called chelators, may be used for treatment. Some physicians begin chelation at lower levels, often 25 mcg/dL. These medications are given in the hospital either through intravenous or intramuscular injections or by mouth. The medicine attaches to the lead and pulls it out of the body with the urine. If the lead level is very high, more than one treatment session may be necessary to lower the amount of lead in the blood. The child's blood is tested frequently during this time to monitor the lead level. Even after treatment, some children's blood lead levels never decrease to less than 10 mcg/dL.

Children with lower blood lead levels often do not need special medicine. They may be placed on healthier diets and monitored more closely to lower their risk of future lead exposure. Foods high in iron, calcium and vitamin C are recommended because they help the body to absorb less lead. Fatty foods should be avoided because fat binds to the lead and helps it to be absorbed more rapidly by the body.

A nurse may send information or visit the home to educate parents about ways to lower the child's blood lead level by demonstrating proper hygiene and housekeeping methods. The nurse also will remind parents of the child's next screening appointment. Follow-up blood testing is very important to assure that the child's lead level is decreasing. If the levels continue to be high, an inspection may be completed by the local health department to identify the sources of lead in the home so these hazards can be removed or corrected.

How can lead levels be lowered?

Blood lead levels can be lowered by taking simple precautions around the house that reduce lead exposure. These methods include the following steps:

- Cleaning up paint chips and peeling paint.
- Washing floors, counter tops and window sills weekly with an all-purpose detergent or a detergent specifically made to remove lead dust.
- Feeding children a diet high in iron, calcium and vitamin C and low in fat.
- Offering children healthy snacks, such as fruit or pretzels, throughout the day so they will not put non-food items into their mouths.
- Using proper safety measures when renovating or remodeling your house, like not using electric sanders or heat guns to remove paint or wallpaper.
- Assuring that children and pregnant women do not enter a work area until renovations are complete and the area has been thoroughly cleaned.
- Washing a child's hands, mouth and face, and toys often.
- Allowing the cold water to run for several minutes in the morning before using it for drinking, cooking or mixing infant formula in case lead pipes or solder are present.
- Removing shoes when coming indoors so lead dust is not tracked inside.
- Laundering work clothes separately from other clothes.
- Not serving or storing food in pottery made outside the United States.
- Most importantly, having children assessed for lead poisoning each year.

For more information on lead poisoning, please contact the Illinois Department of Public Health at 217-782-0403, 800-545-2200 or TTY (hearing impaired use only) 800-547-0466; or call your local health department.

Get the Lead Out
Facts About

Lead Poisoning for Health Care Providers

What blood lead level is considered unsafe?

A child with a blood lead level (BLL) greater than or equal to 10 micrograms per deciliter (mcg/dL) is lead poisoned. The U.S. Centers for Disease Control and Prevention (CDC) changed its definition to this level in 1990 because evidence indicated adverse health effects at lower BLLs. The level considered unsafe has steadily decreased since the early 1960s, when any blood lead result less than 60 mcg/dL was acceptable.

What health effects are associated with lead poisoning?

Lead harms several body systems, with the nervous system being the most severely affected. Lead-poisoned children may suffer from learning disabilities, lower IQ, impaired hearing, stunted growth and mental retardation. Recent studies even suggest a relationship between childhood lead poisoning and behavioral problems later in life. Lead-poisoned children are often iron- and vitamin D-deficient. Despite the seriousness of the problem, lead poisoning often remains undetected because it has no specific symptoms. Children with elevated BLLs may have stomachaches, headaches, poor appetites or sleeping problems. However, most lead-poisoned children show no symptoms at all.

What are common ways children are exposed to lead?

Children are more likely to ingest or inhale lead from paint dust because of their close proximity to the ground and frequent hand-to-mouth behavior. The largest source of lead exposure is paint manufactured before 1978. Besides paint and paint dust, some imported crayons, mini-blinds and pottery have high lead contents, as do certain cosmetics, hair dyes, folk remedies and calcium supplements. Children also can be exposed to lead by parents who participate in activities that involve lead. Some workers, such as battery manufacturers and recyclers, construction workers, auto repairers and lead smelter workers, can carry lead dust home from the workplace. Certain hobbies—stained glass, target shooting and casting fishing weights—can expose families to lead as well.

How often should children be assessed for lead poisoning?

The American Academy of Pediatrics recommends routine, preferably yearly, assessment of children 7 years of age and younger for lead poisoning; 1- and 2-year-old children represent the highest priority for screening. According to Illinois law, all children 6 months through 6 years of age must be assessed for lead poisoning before entering day care, preschool or kindergarten.

How can a health care provider determine which children need blood tests?

Children who live in high-risk areas need blood lead tests, while those who reside in low-risk areas can be assessed for lead exposure using a questionnaire. Census data from 1990 for each ZIP code determines the level of risk. The total number of residents living at or below the poverty level and the age of housing, especially housing built before 1960, account for the major risk factors. For those children who reside in low-risk areas, a state-developed risk assessment questionnaire should be completed by the health care provider. Children with positive answers to any question are considered high risk and should have a blood test.

How should the blood be drawn?

The preferred method for a blood draw is venous. Capillary draws may be used for screening, with the understanding that a capillary specimen can be contaminated by lead dust from a child's hands. CDC does not recommend using a filter paper test, as it also can be contaminated by environmental lead. All capillary results of 10 mcg/dL or greater and all

samples analyzed by filter paper method are required to be confirmed by venous testing. The blood erythrocyte protoporphyrin (EP) test should no longer be used because of its reduced sensitivity to lower blood lead levels.

If a child has an elevated lead level, what should a health care provider do next?

Once a child is found to have a BLL of 10 mcg/dL or greater, the health care provider is required to report the results to the Illinois Department of Public Health, which refers the case to the local health department. The local health department begins public health measures at a BLL of 15 mcg/dL. A public health nurse may visit the home to teach parents housekeeping and hygiene to prevent further exposure, and a state or local inspector may evaluate the building to identify lead hazards. The physician and local health department personnel may collaborate about medical issues and follow-up activities.

Health care providers need to educate parents on the meaning of the BLL and potential health effects. Parents of all lead-poisoned children should receive information about sources of lead and ways BLLs can be reduced. Proper nutrition should be stressed, especially a low-fat diet that is high in iron, calcium and vitamin C. Follow-up testing also is very important to assure that the child's BLL does not increase. Health care providers may refer patients to other agencies to provide additional services needed by the family.

Children with BLLs of 20 mcg/dL or greater should receive medical evaluations. The evaluation should include the following steps:

- 1) Detailed history of symptoms, existence of pica, siblings with lead poisoning, potential sources of lead and previous blood lead results.
- 2) Description of age and condition of all housing where the child spends time.
- 3) Occupational histories of adults in the household to determine if the child is exposed to lead brought home from the workplace.
- 4) Physical examination, with special attention to neurologic, psychosocial and language development. Learning or developmental delays should prompt further assessment and referrals to appropriate programs.
- 5) Evaluation of nutritional status, especially of calcium, iron, zinc and copper, as deficiencies in these nutrients may increase lead absorption. Iron levels should be obtained for all lead-poisoned children using laboratory tests.

Children with higher BLLs may need chemical treatment. The U.S. Food and Drug Administration approves the use of succimer (Chemet®) for treating children with BLLs greater than 45 mcg/dL, but some physicians begin chelation at lower levels, often 25 mcg/dL. These children need to be monitored more closely for at least one year until the BLL decreases. They should be seen by a physician every other week for eight weeks and, then, once a month for six months.

When should lead-poisoned children be retested?

Follow-up testing should take place, according to the following schedule:

- | | |
|----------------|--|
| • 10-14 mcg/dL | Repeat Venous Test in six months |
| • 15-19 mcg/dL | Repeat venous test in two months. |
| • 20-44 mcg/dL | Repeat venous test between one week and one month
(higher levels should be repeated more promptly). |
| • 45-69 mcg/dL | Repeat venous test within 48 hours. |
| • ≥ 70 mcg/dL | Repeat venous test immediately as an emergency laboratory test. |

Where can health care providers obtain additional information about lead poisoning?

For additional information, including brochures, copies of the *Guidelines for the Detection and Management of Lead Poisoning for Physicians and Health Care Providers*, the high risk ZIP codes or the risk assessment questionnaire or other information about lead poisoning prevention, please contact the Illinois Department of Public Health at 217-782-0403, 800-545-2200 or TTY (hearing impaired use only) 800-547-0466; or call your local health department.